



P/O/SB/21 (07-06)

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

7+11
refs.

Application Number

10/525,573

Filing Date

July 17, 2006

First Named Inventor

Lorens, James B.

Art Unit

4166

Examiner Name

Sumesh Kaushal

Attorney Docket Number

021044-004110US

ENCLOSURES (Check all that apply)

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)



Reply to Missing Parts/ Incomplete Application



Reply to Missing Parts under 37 CFR 1.52 or 1.53



Drawing(s)



Licensing-related Papers



Petition



Petition to Convert to a Provisional Application



Power of Attorney, Revocation Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) _____



Landscape Table on CD



After Allowance Communication to TC



Appeal Communication to Board of Appeals and Interferences



Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)



Proprietary Information



Status Letter



Other Enclosure(s) (please identify below):

11 references, Return Postcard

Remarks

The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

Townsend and Townsend and Crew LLP

Signature

Printed name

Beth L. Kelly

Date

4/9/07

Reg. No.

51,868

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature

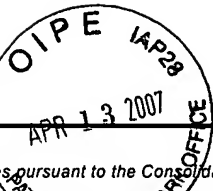
Julie Taylor Clough

Typed or printed name

Julie Taylor Clough

Date

4-10-07



Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2006☒ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 180**Complete if Known**

Application Number	10/525,573
Filing Date	July 17, 2006
First Named Inventor	Lorens, James B.
Examiner Name	Sumesh Kaushal
Art Unit	4166
Attorney Docket No.	021044-004110US

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 20-1430 Deposit Account Name: Townsend and Townsend and Crew LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Small Entity	Fee (\$)	Small Entity	Fee (\$)	Small Entity	Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Fee (\$)	Small Entity
	Fee (\$)
50	25
200	100
360	180
Multiple Dependent Claims	
Fee (\$)	Fee Paid (\$)

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
-20 or HP = _____ x _____ = _____			

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
-3 or HP = _____ x _____ = _____			

HP = highest number of independent claims paid for, if greater than 3

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____				

4. OTHER FEE(S)

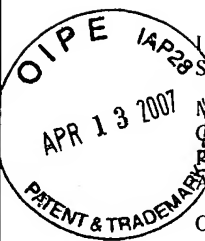
Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Submission of Information Disclosure Stmt

180

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	51,868	Telephone	415-576-0200
Name (Print/Type)	Beth L. Kelly	Date	4-9-07		



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PATENT
Attorney Docket No.: 021044-004110US
Client Reference No.:
P.0124.00.PC.UT.NEW.RR

On April 10, 2007

TOWNSEND and TOWNSEND and CREW LLP

By: Julie Taylor Clough

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

James B. Lorens et al.

Application No.: 10/525,573

Filed: July 17, 2006

For: MODULATORS OF
ANGIOGENESIS

Confirmation No.: 4166

Examiner: Sumesh Kaushal

Art Unit: 4166

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A&08B are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references AD-AQ can be found in Application No. 10/231,956, filed August 30, 2002 (Attorney Docket No. 021044-004100US). Copies of the references AR-BA are enclosed.

Also enclosed is a copy of the Search/Examination report corresponding to the PCT application.

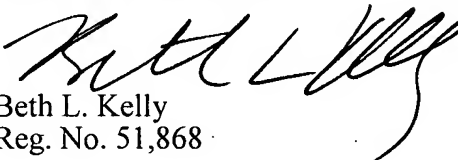
It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This IDS is being filed before the mailing date of the final Office Action or Notice of Allowance.

Please charge the IDS fee of \$180 to Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Beth L. Kelly
Reg. No. 51,868

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415-576-0300
BLK:jtc



Substitute for form 1449A&B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	10/525,573
				Filing Date	July 17, 2006
				First Named Inventor	Lorens, James B.
				Art Unit	4166
Examiner Name	Sumesh Kaushal				
Attorney Docket Number	021044-004110US				
Sheet	1	of	3		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-			
	AB	US-			

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
	AC							<input type="checkbox"/>
	AD	PCT	PCT/US03/ 027523		09/02/2003	Lorens, et al.		<input type="checkbox"/>

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AE	GRIFFIOEN, Arjan W. and MOLEMA, Grietje, "Angiogenesis: Potentials for Pharmacologic Intervention in the Treatment of Cancer, Cardiovascular Diseases, and Chronic Inflammation," 2000; <u>Pharmacological Reviews</u> ; Vol. 52; No. 2; pp. 237-268.	<input type="checkbox"/>
	AF	CHO, Hyekyung P., et al., "Cloning, Expression, and Fatty Acid Regulation of the Human Δ-5 Desaturase," December 24, 1999; <u>The Journal of Biological Chemistry</u> ; Vol. 274; No. 52; pp. 37335-37339.	<input type="checkbox"/>
	AG	BROOKS <i>et al.</i> , <u>Science</u> 264:569-571 (1994)	<input type="checkbox"/>
	AH	TANG <i>et al.</i> , <u>J. Cell Sci.</u> 108:2629-2644 (1995)	<input type="checkbox"/>
	AI	KLEMKE <i>et al.</i> , <u>J. Cell Biol.</u> 140:961-972 (1998)	<input type="checkbox"/>
	AJ	LEONARD <i>et al.</i> , <u>Biochem. J.</u> 347:719-724 (2000)	<input type="checkbox"/>

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A&B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	10/525,573
				Filing Date	July 17, 2006
				First Named Inventor	Lorens, James B.
				Art Unit	4166
				Examiner Name	Sumesh Kaushal
Sheet	2	of	3	Attorney Docket Number	021044-004110US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²	
	AK	PAULHE <i>et al.</i> , <u>J. Biol. Chem.</u> 276:41832-41840 (2001)	<input type="checkbox"/>	
	AL	MAESHIMA <i>et al.</i> , <u>J. Biol. Chem.</u> 276:31959-31968 (2001)	<input type="checkbox"/>	
	AM	SCHOR <i>et al.</i> , "Chemotoxis and Chemokinesis in 3D Macromolecular Matrices, in Angiogenesis Protocols," Murray ed., Human Press, Totowa New Jersey (2001)	<input type="checkbox"/>	
	AN	OTSUKI, <i>et al.</i> , GenBank Accession No. NP_037534	<input type="checkbox"/>	
	AO	OTSUKI, <i>et al.</i> , GenBank Accession No. MN_013402	<input type="checkbox"/>	
	AP	ALESSI <i>et al.</i> , "Molecular targeting of angiogenesis Biochimica et Biophysica Acta", March 2004, pp. 39-49, Vol. 1654	<input type="checkbox"/>	
	AQ	Database GenEMbl on GenCore AN:BC025358, November 2003, STRAUSBERG, R.L., <i>et al.</i> Homo sapiens ATP-binding cassette, sub family D (ALD), member 1, mRNA (cDNA clone MGC 39449 IMAGE: 4907640)		
	AR	CHOI, S.J., <i>et al.</i> , GenBank Accession No. NM_015571		
	AS	CHOI, S.J., <i>et al.</i> , GenPept Accession No. NP_056386		
	AT	BAILEY, Daniel and O'HARE, Peter, "Characterization of the Localization and Proteolytic Activity of the SUMO-specific Protease, SENP1," January 2, 2004; <u>The Journal of Biological Chemistry</u> ," Vol. 279; No. 1; pp. 692-703:		
	AU	BEAUSOLEIL, Sean A., <i>et al.</i> , "Large-Scale Characterization of HeLa Cell Nuclear Phosphoproteins," August 17, 2004; <u>PNAS</u> ; Vol. 101; No. 33; pp. 12130-12135.		

Examiner Signature		Date Considered	
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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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				Art Unit	4166
				Examiner Name	Sumesh Kaushal
Sheet	3	of	3	Attorney Docket Number	021044-004110US

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Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²	
	AV	CHOI, S.J., et al., "Negative Modulation of RXR α Transcriptional Activity by Small Ubiquitin-Related Modified (SUMO) Modification and Its Reversal by SUMO-Specific Protease SUSP1," October 13, 2006; <u>Journal of Biological Chemistry</u> ; Vol. 281; No. 41; pp. 30669-30677.		
	AW	GOODSON, Michael L., et al., "SUMO-1 Modification Regulates the DNA Binding Activity of Heat Shock Transcription Factor 2, a Promyelocytic Leukemia Nuclear Body Associated Transcription Factor," May 25, 2001; <u>The Journal of Biological Chemistry</u> ; Vol. 276; No. 21; pp. 18513-18518.		
	AX	KIM, Keun Il; et al., "A New SUMO-1-Specific Protease, SUSP1, That is Highly Expressed in Reproductive Organs," May 12, 2000; <u>The Journal of Biological Chemistry</u> ; Vol. 275; No. 19; pp. 14102-14106.		
	AY	MUKHOPADHYAY, D., et al., "SUSP1 Antagonizes Formation of Highly SUMO2/3-Conjugated Species," September 25, 2006; <u>The Journal of Cell Biology</u> ; Vol. 174; No. 7; pp. 939-949.		
	AZ	TOJO, Masahide, et al., "The Aryl Hydrocarbon Receptor Nuclear Transporter is Modulated by the SUMO-1 Conjugation System; November 29, 2002; <u>The Journal of Biological Chemistry</u> ; Vol. 277; No. 48; pp. 46576-46585.		
	BA	YEH, Edwatd T.H., et al., "Ubiquitin-Like Proteins: New Wines in New Bottles," 2000; <u>Gene</u> ; Vol. 248; pp. 1-14.		
	BB			

Examiner Signature		Date Considered	
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